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Application Number	10/044,013	
Filing Date	October 26, 2001	
First Named Inventor	Nabil R. Yousef	
Group Art Unit	2631	
Examiner Name		
Attorney Docket Number	BP 1914	

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	INFORMATION DISCLOSURE	Filing Date	October 26, 2001
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γq		KAILATH, SAYED: "Displacement structure: theory and applications" SIAM REVIEW, vol. 37, no. 3, September 1995 (1995-09), pages 297-386, XP002189613 New York, US	
K		SAILER: "Decision feedback equalization for powerline and HIPERLAN" DISSERTATION SUBMITTED TO THE SWISS FEDERAL INSTITUTE OF TECHNOLOGY, ZURICH, FOR THE DEGREE OF DOCTOR OF TECHNICAL SCIENCES, 11 April 2001, pages 1-126, XP002189615, Zurich CD	
M		CHUN, KAILATH: "Generalized displacement structure for block-Toeplitz, Toeplitz-block, and Toeplit-derived matrices" NATO ASI SERIES, vol. F70, 1991, pages 215-236, XP000852863 Berlin, DE ISSN: 0258-1248,	
P		CIOFFI, KAILATH: "Fast, recursive-least-squares transversal filters and adaptive filtering" IEEE TRANSACTIONS ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING, vol. 32, no. 2, April 1984, pages 304-337, XP008015403, New York, US	
M		LJUNG ET AL.: "Fast calculation of gain matrices for recursive estimation schemes" INTERNATIONAL JOURNAL OF CONTROL, vol. 27, no. 1, January 1978, pages 1-19, XP008002548, BASINGSTOKE, GB, ISSN: 0020-7179	
W		AL-DHAHIR CIOFFI: "MMSE decision feedback equalizers: finite-length results" IEEE TRANSACTIONS ON INFORMATION THEORY, vol. 41, no. 4, July 1995, pages 961-975, XP002190789, New York, US	
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Packet Data Transmission, IEEE Transactions on Signal Processing, Vol. 43, No. 11, pp. 2462-2473, November 1995.  NAOFAL AL-DHAHIR and ALI H. SAYED, A Computationally-Efficient FIR MMSE-DFE for Multi-User Communications, Signals, Systems, and Computers. Conference Record of the Thirty-Third Asilomar Conference on, Volume 1, 1999, pp. 207-209.  NAOFAL AL-DHAHIR and ALI H. SAYED, CORDIC-Based MMSE-DFE Coefficient Computation, Digital Signal Processing Journal, vol. 9, no. 3, pp. 178-194, July 1999.  NAOFAL AL-DHAHIR and Ali H. Sayed, The Finite-Length Multi-Input Multi-Output MMSE-DFE, IEEE Transactions on Signal Processing, Vol. 48, No. 10, pp. 2921-2936, October 2000.  NAOFAL AL-DHAHIR and ALI H. SAYED, A Computationally-Efficient FIR MMSE-DFE for Multi-User Communications, Signals, Systems, and Computers. Conference Record of the Thirty-Fourth Asilomar Conference on, Volume 2, 2000 pp. 1867-1871.					ine, journal, serial, syn	nposium, catalog, etc.), date, pag	ge(s), volume-issue number(s),		F.	e object
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